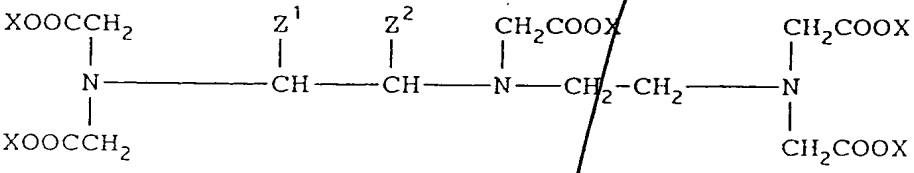
WHAT IS CLAIMED IS:

1. A compound of the formula



(I),

wherein

Z^1 and Z^2 in each case independently are the residue

$$-(CH_2)_m-(C_6H_4)_q-(O)_k-(CH_2)_n-(C_6H_4)_l-(O)_r-R,$$

wherein

m and n independently are 0-20,

k, l, q and r each independently is 0 or 1,

R is hydrogen, optionally OR^1-substituted C_1-C_6-alkyl or CH_2COOR^1,

R^1 is hydrogen, C_1-C_6-alkyl or benzyl,

X is a hydrogen atom and/or a metal ion equivalent of an element of atomic number 21-29, 42, 44 or 57-83, with the provisos that at least two of the substituents X represent a metal ion equivalent; that one of the substituents Z^1 and Z^2 is hydrogen and the other is not hydrogen; and that when n and l each are 0, then k and r are not each simultaneously 1; that $-(O)_r-R$ is not $-OH$; and that Z^1 and Z^2 are not $-CH_2-C_6H_4-O-CH_2-COOCH_2C_6H_5$ or $-CH_2-C_6H_4-O-(CH_2)_5-COOCH_2C_6H_5$,

or a physiologically acceptable salt thereof with an inorganic and/or organic base, an amino acid or an amino acid amide.

2. A method of claim 1, wherein Z^1 is hydrogen and Z^2 is $-(CH_2)_m-(C_6H_4)_q-(O)_k-(CH_2)_n-(C_6H_4)_l-(O)_r-R$, which is not hydrogen.

3. A method of claim 1, wherein Z^2 is hydrogen and Z^1 is $-(CH_2)_m-(C_6H_4)_q-(O)_k-(CH_2)_n-(C_6H_4)_l-(O)_r-R$, which is not hydrogen.

4. A method of claim 1 wherein Z^1 is $-CH_2-C_6H_4-OCH_3$, ~~$-CH_2-C_6H_5$~~, $-CH_2-C_6H_4-O-CH_2-C_6H_4-OCH_3$, $-CH_2-O-CH_2-C_6H_5$, $-CH_2-C_6H_4-O-CH_2-COOH$, $-CH_2-C_6H_4-OC_2H_5$, $-CH_2-C_6H_4-OC_4H_9$ or $-CH_2-C_6H_4-O-CH_2-C_6H_5$.

5. A method of claim 1 wherein Z^2 is $-CH_2-C_6H_4-OCH_3$, ~~$-CH_2-C_6H_5$~~, $-CH_2-C_6H_4-O-CH_2-C_6H_4-OCH_3$, $-CH_2-O-CH_2-C_6H_5$, $-CH_2-C_6H_4-O-CH_2-COOH$, $-CH_2-C_6H_4-OC_2H_5$, $-CH_2-C_6H_4-OC_4H_9$ or $-CH_2-C_6H_4-O-CH_2-C_6H_5$.

6. A compound of claim 1, wherein at least one X is Gd.

7. A compound of claim 4, wherein at least one X is Gd.

8. A compound of claim 5, wherein at least one X is Gd.

9. Gadolinium complex of 3,6,9-triaza-3,6,9-tris(carboxymethyl)-4-(4-methoxybenzyl)-undecanedioic acid;

europium complex of 3,6,9-triaza-3,6,9-tris(carboxymethyl)-4-(4-methoxybenzyl)undecanedioic acid;

iron(III) complex of 3,6,9-triaza-3,6,9-tris(carboxymethyl)-4-(4-methoxybenzyl)undecanedioic acid;

bismuth complex of 3,6,9-triaza-3,6,9-tris(carboxy-

methyl)-4-(4-methoxybenzyl)undecanedioic acid;

gadolinium complex of 3,6,9-triaza-3,6,9-tris(carboxy-methyl)-5-(4-methoxybenzyl)undecanedioic acid;

gadolinium complex of 3,6,9-triaza-3,6,9-tris(carboxy-methyl)-4-[4-(4-methoxybenzyloxy)benzyl]undecanedioic acid;

gadolinium complex of 3,6,9-triaza-3,6,9-tris(carboxy-methyl)-4-benzylundecanedioic acid;

ytterbium complex of 3,6,9-triaza-3,6,9-tris(carboxy-methyl)-4-benzylundecanedioic acid;

gadolinium complex of 3,6,9-triaza-3,6,9-tris(carboxy-methyl)-4-benzyloxymethylundecanedioic acid;

gadolinium complex of 3,6,9-triaza-3,6,9-tris(carboxy-methyl)-4-(4-carboxymethoxybenzyl)undecanedioic acid;

gadolinium complex of 3,6,9-triaza-3,6,9-tris(carboxy-methyl)-4-(4-ethoxybenzyl)undecanedioic acid;

europium complex of 3,6,9-triaza-3,6,9-tris(carboxy-methyl)-4-(4-ethoxybenzyl)undecanedioic acid;

iron complex of 3,6,9-triaza-3,6,9-tris(carboxy-methyl)-4-(4-ethoxybenzyl)undecanedioic acid;

gadolinium complex of 3,6,9-triaza-3,6,9-tris(carboxy-methyl)-4-(4-butoxybenzyl)undecanedioic acid;

europium complex of 3,6,9-triaza-3,6,9-tris(carboxy-methyl)-4-(4-butoxybenzyl)undecanedioic acid;

iron complex of 3,6,9-triaza-3,6,9-tris(carboxy-methyl)-4-(4-butoxybenzyl)undecanedioic acid;

gadolinium complex of 3,6,9-triaza-3,6,9-tris(carboxy-methyl)-4-(4-benzyloxybenzyl)undecanedioic acid;

europium complex of 3,6,9-triaza-3,6,9-tris(carboxy-methyl)-4-(4-benzyloxybenzyl)undecanedioic acid;

iron complex of 3,6,9-triaza-3,6,9-tris(carboxy-methyl)-4-(4-benzyloxybenzyl)undecanedioic acid.

each a compound of claim 1.

10. A pharmaceutical composition comprising a compound of claim 1 and a pharmaceutically acceptable carrier.

11. A method of enhancing an NMR image comprising administering to a patient a compound of claim 1, wherein at least one X is of atomic number 21-29, 42, 44 or 58-70.

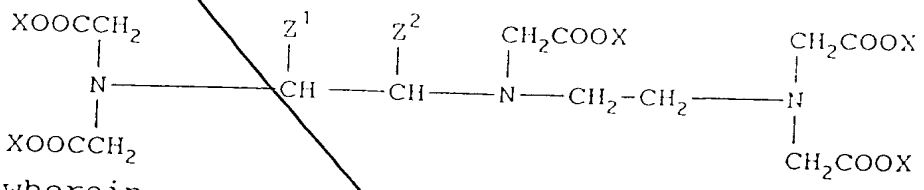
12. A method of enhancing an X-ray image comprising administering to a patient a compound of claim 1, wherein at least one X is of atomic number 21-29, 42, 44 or 57-83.

13. A method of claim 11, wherein the renal system ~~or the hepatobiliary system~~ is imaged.

14. A method of claim 12 wherein ~~the renal system or~~ the hepatobiliary system is imaged.

15. In a method of conducting radiation therapy of a patient comprising administering a radioactive metal ion to the patient, the improvement wherein the radioactive metal ion is administered in the form of a compound of claim 1.

16. A method of enhancing an NMR image of the GI tract of a patient comprising administering a compound of the formula



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or a physiologically acceptable salt thereof with an inorganic and/or organic base, an amino acid or an amino acid amide.